REMARKS/ARGUMENTS

Claims 1-5, 8-19, 21, 27-49, 51-53, 57-62, 87, 88, 90-120, 133 and 134 are pending. Claims 1 and 48 have been amended. Applicants respectfully request reexamination and reconsideration of all pending claims.

Claim Rejection Under 35 U.S.C. § 102(e)

Claims 1-5, 8-19, 21, 27-49, 51-53, 57-62, 87, 88, 90-120, 133 and 134 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Chishti et al. (U.S. Patent No. 5,975,893). Applicants respectfully traverse this rejection.

The Office Action states, "With respect to the above rejection under 35 U.S.C. 102, it appears that this application may not have copendency with patent 5,975,893, and as such, the rejection is proper." Applicants direct the Examiner's attention to paragraph [0001] of the present application (reproduced below) as filed on November 20, 2003, as well as to the Application Data Sheet filed therewith, both of which clearly state the priority claim of the present application.

> **[0001]** This application is a continuation of U.S. Application No. 09/686,190 (Attorney Docket No. 018563-004810 - AT-00105.1), filed October 10, 2000, which was a continuation of U.S. Application No. 09/169,276 (Attorney Docket No. 18563-004800 - AT-00105), filed October 8, 1998, (now abandoned), which is a continuation-in-part of PCT Application No. US98/12681 (Attorney Docket No. 18563-000120PC - AT-00003PC), filed on June 19, 1998, which claimed priority from U.S. Patent Application No. 08/947,080 (Attorney Docket No. 18563-000110 - AT-00002), filed on October 8, 1997, (now Patent No. 5,975,893), which claims priority from U.S. Provisional Application No. 60/050,342 (Attorney Docket No. 18563-000100 - AT-0001), filed on June 20, 1997, the full disclosures of which are incorporated in this application by reference.

Applicants note that the USPTO's PAIR system does not show a priority claim for the present application from U.S. Patent Application No. 08/947,080, now Patent No. 5,975,893. This application (now issued patent) was included in the priority claim as filed,

however. Thus, the present application does have copendency with U.S. Patent No. 5,975,893, and Applicants therefore request withdrawal of the rejection under 35 U.S.C. § 102(e). Applicants also request that the priority claim shown on PAIR be corrected to include the 5,975,893 priority claim.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-5, 8, 9, 13, 21, 27-30, 32-49, 51, 52, 57, 59-62, 87, 88, 90-115, 117-120 and 133 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Martz (U.S. Patent No. 4,793,803) in view of Andreiko et al. (U.S. Patent No. 5,454,717). Claims 10-12, 14-19, 53, 31, 58, 116 and 134 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Martz in view of Andreiko et al. and further in view of several additional cited references. Applicants respectfully traverse these rejections.

As amended, independent claim 1 of the present application is directed to a computer-implemented method for use in creating a treatment plan to reposition a patient's teeth from a set of initial tooth positions to a set of final tooth positions. One step in the claimed method involves generating, **at the outset of treatment**, a plurality of sets of appliances having cavities and wherein the cavities of successive appliances have different geometries shaped to receive and reposition teeth from the initial positions to the final positions. Similarly, independent claim 48 is directed to a computer program for use in creating a treatment plan to reposition a patient's teeth, the program including executable instructions operable to cause a computer to, among other things, generate, **at the outset of treatment**, a plurality of sets of appliances. Thus, both pending independent claims of the present application, as well as all the dependent claims, which depend variously therefrom, specify that a plurality of appliances are generated at the outset of treatment.

In contrast, Martz teaches using a wax setup of plaster teeth to make one set of tooth positioners at a time. (See column 3, line 50, through column 4, line 15.) Martz does mention that "As time goes on, movement of the teeth may be accomplished through multiple stages of the appliance by utilizing more than one wax setup." (emphasis added) Martz does not disclose, teach or suggest, however, generating multiple sets of appliances at the outset of

treatment. In fact, such generation of multiple sets of appliances at the outset would not be practicable using the Martz method, because Martz does not teach a method for generating a set of intermediate positions toward which the teeth will move while moving from the initial positions to the final positions. Instead, Martz simply teaches a manual method for making one set of appliances (one upper jaw appliance and one lower jaw appliance) using a manually manipulated wax setup. If additional sets of appliances were made using the Martz method, they would be made after treatment had commenced ("as time goes on") and would be made one set at a time from separate wax setup models. (Column 4, lines 14-15.)

Andreiko et al. describes a system for making customized brackets and archwires, similar to those used in traditional orthodontic treatments. Just as with Martz, Andreiko does not disclose, teach or suggest generating multiple sets of appliances at the outset of treatment, but instead simply teaches making one set of appliances at a time. This one-set-at-a-time method is consistent with the use of traditional brackets and archwires, which are typically placed on a patient's teeth and then later adjusted to achieve additional tooth movement.

Therefore, neither Martz nor Andreiko, considered alone or in combination, teaches generating a plurality of sets of appliances at the outset of treatment as in the currently pending claims. Furthermore, none of the additional references cited in the Office Action teaches such a limitation. Applicants thus submit that even if the various combinations suggested in the Office Action were made, the invention of claims 1, 48 and the dependent claims therefrom would not be achieved. Therefore, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a).

Double Patenting Rejection

A terminal disclaimer is being filed concurrently with this Amendment to disclaim U.S. Patent No. 5,975,893. Applicants thus request withdrawal of the double patenting rejection based on Patent No. 5,975,893.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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